

property of the product of the polymerization reaction may be determined (e.g., yield, molecular weight). These are claimed separately, see, e.g., claims 44-46.

In the current Office Action previously delineated Groups II and III are recombined into a group containing claims 16-38 and 40-58. However an election of species is imposed. The species are delineated and responded to in as presented in the pending action:

Species of "method further comprising" and "monomer"

Applicants elect "Copolymerizing the first and second monomer", with monomers 1-octene and ethylene being the first and second monomers, respectively.

Species of "dispensing"

Applicants elect "liquid" dispensing.

First species of "determining polymerization performance"/"determining a property"

Applicants elect "concentration". However, this species election is somewhat confusing to Applicants since high throughput chromatography can be used to determine polymer concentration and/or polydispersity. Claims 45, 46 and 47 are alternatives to each other, but the technique of claim 47 might be used to accomplish the requirements of claims 45 and/or claim 46. Thus, Applicants traverse this particular species election.

Second species of "determining polymerization performance"/"determining a property"

Applicants elect "reaction mixture" and specifically the "polymer concentration" in the reaction mixture (*i.e.*, yield).

The only difference between this election and the previous election is in the second species of determining polymerization performance. Also, the single species is shown in the examples, as discussed in Applicants first election of species.

Claims reading on this elected species are claims 16-19, 24-26, 28, 30-33, 37, 38, 41-43, 45 and 50.

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- 1 42. (Amended) A screening method for high throughput screening of potential
  - 2 catalysts for polymerization performance for at least a second monomer, comprising:
  - 3 concurrently reacting a plurality of at least 8 potential catalysts arrayed on a
  - 4 substrate with a first monomer; and
  - 5 determining a property of any polymer sample or polymerization mixture made
  - 6 during the reaction step at a rate of one hour or less per potential catalyst.

#### REMARKS

Applicants appreciate the interview with the Examiner on January 9, 2002. This response is consistent with the remarks made during that interview.

Applicants have amended the claims in order to make them more consistent with regard to the terms used, which should assist the Examiner in conjunction with the current election of species requirement. Also, the dependency of claims 25-28 was amended to correct an obvious error.

Specifically, claims 16, 41 and 42 have been amended to use the term polymerization "performance" as compared to "activity." It was and is Applicants intent that the term "performance" be a broader term than "activity", but with "activity" being one measure of performance. Thus, for example, the term "catalyst activity" is one measure of "polymerization performance" (see, for example, page 13, lines 5-6 of the specification which states "polymerization performance (e.g., catalyst activity)"). "Activity" was and is intended to be used in the manner consistent with the accepted knowledge of one of ordinary skill in the art. Thus, for example, "catalyst activity" is commonly measured as the amount of polymer produced as compared to the amount of catalyst used usually expressed per unit time.

Another phrase used in the claims and specification is "determining a property" (e.g., claim 42). This phrase is intended to be an alternate phrase to "determining polymerization performance", but may be of different scope depending upon what is the subject of the determination. For completeness, Applicants have simply attempted to claim their invention in language of differing scope. For example, a property of the polymerization reaction may be determined (e.g., monomer consumption during the reaction, temperature, pressure, etc.) or a

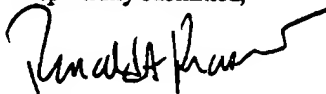
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PATENT

Applicants respectfully request prosecution on the merits of this case.

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**APPENDIX A SHOWING CLAIM AMENDMENTS**

16. (Amended) A method of screening potential catalysts for polymerization performance [activity] wherein the polymerization performance [activity] of the potential catalysts is determined for at least a first monomer as a predictor for the polymerization performance [activity] of the potential catalysts for at least a second monomer, the first and second monomers being different from each other and the first monomer being an olefin other than ethylene, the method comprising:

concurrently reacting an array of at least 8 potential polymerization catalysts that are different from each other with the at least [a] first monomer under polymerization conditions; and

determining the polymerization performance of each of the potential catalysts with the at least first monomer.

1 25. (Amended) A screening method according to Claim 24 [16], wherein the reacting  
2 step further comprises adding other compositions to the wells other than the first or second  
3 monomers or the catalysts.

1 26. (Amended) A screening method according to Claim 24 [16] comprising dispensing  
2 the first monomer as a liquid into each reaction vessel that contains one of the potential catalysts  
3 prior to the step of reacting the catalyst with the first monomer.

1 27. (Amended) A screening method according to Claim 24 [16] comprising distributing  
2 the first monomer as a gas to each reaction vessel that contains one of the potential catalysts  
3 prior to the step of reacting the catalyst with the first monomer.

1 28. (Amended) A screening method according to Claim 24 [16] further comprising:  
2 activating the potential catalysts; and  
3 wherein at least a portion of the at least first monomer is provided to each reaction vessel  
4 prior to activation of the potential catalysts.

1 41. (Amended) A screening method according to Claim 16 comprising:

2       measuring the polymerization performance [activity] of each of the potential catalysts  
3       with the at least first monomer; and  
4       predicting the polymerization activity of each of the potential catalysts for at least a  
5       second monomer, wherein the first and second monomers are chemically different from each  
6       other and the first monomer is an olefin other than ethylene.

1       42. (Amended) A screening method for high throughput screening of potential catalysts  
2       for polymerization performance [activity] for at least a second monomer, comprising:  
3       concurrently reacting a plurality of at least 8 potential catalysts arrayed on a substrate  
4       with a first monomer; and  
5       determining a property of any polymer sample or polymerization mixture made during  
6       the reaction step at a rate of one hour or less per potential catalyst.